

L Number	Hits	Search Text	DB	Time stamp
1	4	"6252048"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:38
2	5	"6046036"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:39
3	2	"5879899"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:39
5	9	"6252048" or "6046036" or "5879899"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:41
6	839	kuramitsu.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:41
7	2	kuramitsu.in. and muty	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:48
8	896	MutY and fusion	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:42
9	3	MutY same fusion	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:42
10	4	MutY same thermophilus	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:45
11	6	MutY same thermus	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:45
12	1	kuramitsu.in. and muty and fusion	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:49
13	0	kuramitsu.in. and muty adj10 used	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:49
14	0	kuramitsu.in. and muty adj20 used	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:49

15	0	kuramitsu.in. and muty adj20 function	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:49
16	0	kuramitsu.in. and muty adj10 for	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:50
17	0	kuramitsu.in. and muty adj10 method	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:50
18	5	kuramitsu.in. and enzyme adj10 used	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/03/09 10:50

FILE 'MEDLINE' ENTERED AT 10:58:33 ON 09 MAR 2004

FILE 'CAPLUS' ENTERED AT 10:58:33 ON 09 MAR 2004
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=> **s muty and thermu**
 L1 10 MUTY AND THERMU

=> **s muty and thermus**
 L2 10 MUTY AND THERMUS

=> **s 12 and py<=2001**
 L3 6 L2 AND PY<=2001

=> **dup rem 13**
 PROCESSING COMPLETED FOR L3
 L4 5 DUP REM L3 (1 DUPLICATE REMOVED)

=> **d ibib abs 1-5**

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
 Text References

ACCESSION NUMBER: 2001:731046 CAPLUS
 DOCUMENT NUMBER: 135:283927
 TITLE: Chimeric proteins for detection and quantitation of
 DNA mutations, DNA sequence variations, DNA damage and
 DNA mismatches
 INVENTOR(S): McCutchen-Malone, Sandra L.
 PATENT ASSIGNEE(S): Regents of the University of California, USA
 SOURCE: PCT Int. Appl., 128 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001073079	A2	20011004	WO 2001-US9700	20010326 <--
WO 2001073079	A3	20020516		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
 LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
 SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
 ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6340566	B1	20020122	US 2000-651656	20000829
US 6365355	B1	20020402	US 2000-650855	20000829

PRIORITY APPLN. INFO.: US 2000-192764P P 20000328
 US 2000-650855 A 20000829

AB Chimeric proteins having both DNA mutation regions binding activity and
 nuclease activity are synthesized by recombinant technol. The proteins
 are of the general formula A-L-B and B-L-A where A is a peptide having DNA
 mutation region binding activity, L is a linker and B is a peptide having

nuclease activity. The chimeric proteins are useful for detection and identification of DNA sequence variations including DNA mutations (including DNA damage and mismatches) by binding to the DNA mutation and cutting the DNA once the DNA mutation is detected. Prepn. of chimeric encoding cDNA by PCR, recombinant prepn. of 12 chimeric proteins such as Nuc-Linker-XPA fragment, and assaying for activity for DNA damage detection were also described. The method may be used for disease detection.

L4 ANSWER 2 OF 5 MEDLINE on STN

Full Text References

ACCESSION NUMBER: 2001544679 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 11591657
 TITLE: Molecular cloning and functional analysis of the **MutY** homolog of *Deinococcus radiodurans*.
 AUTHOR: Li X; Lu A L
 CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, School of Medicine, University of Maryland, Baltimore, Maryland 21201, USA.
 CONTRACT NUMBER: GM 35132 (NIGMS)
 SOURCE: *Journal of bacteriology*, (2001 Nov) 183 (21) 6151-8.
 Journal code: 2985120R. ISSN: 0021-9193.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 200112
 ENTRY DATE: Entered STN: 20011010
 Last Updated on STN: 20020122
 Entered Medline: 20011204

AB The **MutY** homolog gene (**MutY**(Dr)) from *Deinococcus radiodurans* encodes a 39.4-kDa protein consisting of 363 amino acids that displays 35% identity to the *Escherichia coli* **MutY** (**MutY**(Ec)) protein. Expressed **MutY**(Dr) is able to complement *E. coli* **MutY** mutants but not **mutM** mutants to reduce the mutation frequency. The glycosylase and binding activities of **MutY**(Dr) with an A/G-containing substrate are more sensitive to high salt and EDTA concentrations than the activities with an A/7,8-dihydro-8-oxoguanine (GO)-containing substrate are. Like the **MutY**(Ec) protein, purified recombinant **MutY**(Dr) expressed in *E. coli* has adenine glycosylase activity with A/G, A/C, and A/GO mismatches and weak guanine glycosylase activity with a G/GO mismatch. However, **MutY**(Dr) exhibits limited apurinic/apirimidinic lyase activity and can form only weak covalent protein-DNA complexes in the presence of sodium borohydride. This may be due to an arginine residue that is present in **MutY**(Dr) at the position corresponding to the position of **MutY**(Ec) Lys142, which forms the Schiff base with DNA. The kinetic parameters of **MutY**(Dr) are similar to those of **MutY**(Ec). Although **MutY**(Dr) has similar substrate specificity and a binding preference for an A/GO mismatch over an A/G mismatch, as **MutY**(Ec) does, the binding affinities for both mismatches are slightly lower for **MutY**(Dr) than for **MutY**(Ec). Thus, **MutY**(Dr) can protect the cell from GO mutational effects caused by ionizing radiation and oxidative stress.

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text References

ACCESSION NUMBER: 1999:530333 CAPLUS
 DOCUMENT NUMBER: 131:180792
 TITLE: Methods for removing mutation-inducing nucleotides

during DNA amplification by using MutM and/or **MutY**
 protein of **Thermus thermophilus**
 INVENTOR(S): Arakawa, Taku; Nishiya, Yoshiaki; Kawakami, Fumikiyo;
 Kawamura, Yoshihisa; Kuramitsu, Shigenori
 PATENT ASSIGNEE(S): Toyobo Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11225798	A2	19990824	JP 1998-32738	19980216 <--
PRIORITY APPLN. INFO.:			JP 1998-32738	19980216

AB Described is a method to remove the mutation-inducing nucleotides generated during DNA amplification by PCR or other methods and thus to reduce mutation. The method employs thermostable MutM and/or **MutY** proteins of **Thermus thermophilus**, which proteins are able to remove 8-oxoguanine. The method was demonstrated by amplification of pMOL2, a plasmid vector that carries ampicillin resistance gene and rpsL gene and has been used for the assessment of DNA amplification error during PCR.

L4 ANSWER 4 OF 5 MEDLINE on STN DUPLICATE 1

Full Change
 Text References

ACCESSION NUMBER: 1998127985 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 9461446
 TITLE: Thermostable repair enzyme for oxidative DNA damage from extremely thermophilic bacterium, **Thermus thermophilus** HB8.
 COMMENT: Erratum in: Nucleic Acids Res 1998 Apr 1;26(7):following 1855
 AUTHOR: Mikawa T; Kato R; Sugahara M; Kuramitsu S
 CORPORATE SOURCE: Department of Biology, Graduate School of Science, Osaka University, 1-1 Machikaneyama-cho, Toyonaka, Osaka 560, Japan.
 SOURCE: Nucleic acids research, (1998 Feb 15) 26 (4) 903-10.
 PUB. COUNTRY: ENGLAND: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 OTHER SOURCE: GENBANK-AB008520
 ENTRY MONTH: 199803
 ENTRY DATE: Entered STN: 19980326
 Last Updated on STN: 20020815
 Entered Medline: 19980317

AB The mutM (fpg) gene, which encodes a DNA glycosylase that excises an oxidatively damaged form of guanine, was cloned from an extremely thermophilic bacterium, **Thermus thermophilus** HB8. Its nucleotide sequence encoded a 266 amino acid protein with a molecular mass of approximately 30 kDa. Its predicted amino acid sequence showed 42% identity with the *Escherichia coli* protein. The amino acid residues Cys, Asn, Gln and Met, known to be chemically unstable at high temperatures, were decreased in number in *T. thermophilus* MutM protein compared to those of the *E. coli* one, whereas the number of Pro residues, considered to increase protein stability, was increased. The *T. thermophilus* mutM gene complemented the mutability of the *E. coli* mutM **mutY** double mutant,

suggesting that *T. thermophilus* MutM protein was active in *E.coli*. The *T. thermophilus* MutM protein was overproduced in *E.coli* and then purified to homogeneity. Size-exclusion chromatography indicated that *T. thermophilus* MutM protein exists as a more compact monomer than the *E.coli* MutM protein in solution. Circular dichroism measurements indicated that the alpha-helical content of the protein was approximately 30%. **Thermus** *thermophilus* MutM protein was stable up to 75 degrees C at neutral pH, and between pH 5 and 11 and in the presence of up to 4 M urea at 25 degrees C. Denaturation analysis of *T. thermophilus* MutM protein in the presence of urea suggested that the protein had at least two domains, with estimated stabilities of 8.6 and 16.2 kcal/mol-1, respectively. **Thermus** *thermophilus* MutM protein showed 8-oxoguanine DNA glycosylase activity in vitro at both low and high temperatures.

L4 ANSWER 5 OF 5

MEDLINE on STN

Full Editing
 Text References

ACCESSION NUMBER: 94213845 MEDLINE
 DOCUMENT NUMBER: PubMed ID: 8161527
 TITLE: DNA replication fidelity with 8-oxodeoxyguanosine triphosphate.
 AUTHOR: Pavlov Y I; Minnick D T; Izuta S; Kunkel T A
 CORPORATE SOURCE: Laboratory of Molecular Genetics, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina 27709.
 SOURCE: Biochemistry, (1994 Apr 19) 33 (15) 4695-701.
 Journal code: 0370623. ISSN: 0006-2960.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199405
 ENTRY DATE: Entered STN: 19940606
 Last Updated on STN: 19980206
 Entered Medline: 19940526

AB Oxidative metabolism is known to generate mutagenic compounds within cells, among which is 8-oxodeoxyguanosine. Here the mutagenic potential of the triphosphate form of this base analog (8-O-dGTP) is investigated during replication in vitro of the lacZ alpha-complementation sequence in M13mp2 DNA. Adding 8-O-dGTP at equimolar concentration with the normal dNTPs to polymerization reactions decreases the fidelity of DNA synthesis by exonuclease-deficient Klenow, T4, and **Thermus** *thermophilus* DNA polymerases. Sequence analysis of mutants suggests that 8-O-dGMP is misincorporated opposite template adenines, yielding A-->C transversions. The degree of polymerase selectivity against this error is enzyme-dependent, with rates varying by > 25-fold. To determine if the A.8-O-dGMP mispair is proofread, a direct comparison of the fidelity of proofreading-proficient and proofreading-deficient Klenow and T4 DNA polymerases was made. Although the exonuclease activity of Klenow polymerase did not substantially reduce overall misincorporation of 8-O-dGMP, misincorporation was lower for the proofreading-proficient T4 enzyme as compared to its proofreading-deficient derivative. These data suggest that the A.8-O-dGMP mispair can be proofread. The mutagenic potential of 8-O-dGTP with eukaryotic systems was also examined. Misincorporation of 8-O-dGTP opposite adenine was observed during SV40 origin-dependent replication of double-stranded DNA in HeLa cell extracts. When present during replication at a concentration equal to the four normal dNTPs, 8-O-dGTP was at least 13-fold more mutagenic for A.T-->C.G transversions than was a 100-fold excess of normal dGTP. (ABSTRACT TRUNCATED AT 250 WORDS)

=> **d his**

(FILE 'HOME' ENTERED AT 10:58:24 ON 09 MAR 2004)

FILE 'MEDLINE, CAPLUS' ENTERED AT 10:58:33 ON 09 MAR 2004

L1 10 S MUTY AND THERMU

L2 10 S MUTY AND THERMUS

L3 6 S L2 AND PY<=2001

L4 5 DUP REM L3 (1 DUPLICATE REMOVED)